

Rejections under 35 U.S.C. § 103(a).

Examiner has rejected claims 1-28 under 35 U.S.C. § 103(a) as being unpatentable over Gilhousen et al. (U.S. Pat. No. 5,056,109) in view of Sousa et al. (U.S. Pat. No. 5,832,044). A *prima facie* case of obviousness requires three things. First there must be some suggestion or motivation to combine the teaching of Gilhousen et al. with Sousa et al. to produce the claimed invention. Second, there must be a reasonable expectation of success of the resulting combination. Third, the combined references must teach or suggest all the claim limitations. MPEP 706.02(j). For the following reasons, the cited references miss all three points. Thus, applicants respectfully submit that claims 1-28 are allowable under 35 U.S.C. § 103(a).

I. Failure to teach or suggest all claim limitations

Examiner states that Sousa et al. disclose antenna diversity with simultaneous transmission of data modulated signals over a set of L different antennas. (paper no. 8, page 10). Claim 1 recites “a measurement circuit coupled to receive a first input signal from a first antenna of a transmitter and coupled to receive a second input signal from a second antenna of the transmitter . . . the measurement circuit producing *an output signal corresponding to a magnitude of the first and second input signals.*” Claim 17 recites “a measurement circuit . . . producing *a first output signal corresponding to a magnitude of the first input signal and producing a second output signal corresponding to a magnitude of the second input signal*; and a control circuit coupled to receive *the first and second output signals and a reference signal.*” Claim 22 recites “receiving *a plurality of input signals . . . measuring each input signal* of the plurality of input signals and producing at least one output signal.” Claim 25 recites “producing *a transmit power level of each of a plurality of antennas* in response to the control signal.” (emphasis added).

Gilhousen et al. are silent on diversity. Sousa et al. only teach “Time Interleaving” combined with “Power Control.” Furthermore, Sousa et al. explicitly teach that “the transmitter uses a single antenna and a single carrier frequency” for Time Interleaving and Power Control.

(Channel Model 3, col. 14, lines 7-10 and col. 18, lines 29-32). Neither Gilhousen et al. nor Sousa et al. teach or suggest the above limitations as required by claims 1, 17, 22, or 25. Thus, a combination of Gilhousen et al. and Sousa et al. fail to teach or suggest all the claim limitations.

If, as examiner suggests, one of ordinary skill in the art combined “the fading resistance transmission as disclosed by Sousa et al. with the power control system using CDMA method as disclosed by Gilhousen et al.” one would have “Time Interleaving and Power Control” as disclosed by Sousa et al. (col. 14, lines 7-29). Therein, Sousa et al. explicitly teach that “the transmitter uses a single antenna and a single carrier frequency” for Time Interleaving and Power Control. (Channel Model 3, col. 14, lines 7-10 and col. 18, lines 29-32). This time diversity is the only power control method taught or suggested by Sousa et al. Applicants believe it is the same power control method disclosed in admitted prior art Figure 8 (page 4, lines 1-11) of the instant specification.

To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to be obvious in light of the teachings of the references. Here, there is no teaching or suggestion to produce “an output signal corresponding to a magnitude of the first and second input signals” as required by claim 1 or other claim limitations. Examiner’s *ipse dixit* does not reach a convincing line of reasoning. Moreover, examiner may not use improper hindsight to argue obviousness in view of applicants’ disclosure. Thus, claims 1-28 are patentable under 35 U.S.C. § 103(a).

II. No reasonable expectation of success of the resulting combination

The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a *reasonable likelihood of success*, viewed in the light of the prior art. *Hodosh v. Block Drug Co.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir.), *cert. denied*, 479 U.S. 827

(1986)(*emphasis added*). The teaching or suggestion to make the claimed combination and the *reasonable expectation of success* must both be found in the prior art, not in the applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)(*emphasis added*). Here, there can be no reasonable expectation of success. Neither reference suggests a problem that would motivate a skilled artisan to combine or modify either reference. No combination of Gilhousen et al. with Sousa et al. produces the claimed invention. Thus, claims 1-28 are patentable under 35 U.S.C. § 103(a).

III. No suggestion to combine cited references to produce present invention

It is essential that Office personnel find some motivation or suggestion to make the claimed invention in light of the prior art teachings. See e.g., *In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996)(“[T]he mere possibility that one of the esters or the active methyl group--containing compounds . . . could be modified or replaced such that its use would lead to the specific sulfoakated resin recited in claim 8 does not make the process in claim 8 obvious ‘unless the prior art suggested the desirability of [such a] modification’ or replacement.”)(quoting *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984); *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991)(“[A] proper analysis under § 103 requires, *inter alia*, consideration of . . . whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process.”). Here, there is no suggestion to combine references in either cited reference. Both Gilhousen et al. and Sousa et al. disclose their own respective power control methods. There is no indication that the power control method of either reference is compatible with the other.

Moreover, Sousa et al. specifically teach away from power control of the present invention. Sousa et al. teach that “as a result of the required system overhead to transmit power control bits there will always be (residual) variations in the received power level from frame to frame regardless of the rate of power control adjustments. . . . This variation in power level is similar to the variations that arise due to fading and as in the case of diversity discussed above a spectrally

efficient coding scheme (signal constellation) is required to mitigate the effect of these power variations and consequently reduce the probability of error in the channel.” (col 2, lines 55-67). Sousa et al., therefore, teach that a spectrally efficient coding scheme at the transmitter is *required to mitigate the effect of power variations*. One of ordinary skill in the art would not think to combine Sousa et al. with Gilhousen et al. to produce the claimed invention. This would preclude the required spectrally efficient coding scheme. Furthermore, even a combination of Sousa et al. with Gilhousen et al. would not produce the claimed invention. Thus, claims 1-28 are patentable under 35 U.S.C. § 103(a).

Examiner has erred in concluding that a combination of Gilhousen et al. and Sousa et al. teach all the claimed elements. **Examiner has erred** in concluding that a combination of Gilhousen et al. and Sousa et al. would successfully produce the claimed invention. **Examiner has erred** in concluding that either reference suggests a combining Gilhousen et al. with Sousa et al. to produce the claimed invention.

In view of the foregoing, applicants respectfully request reconsideration and allowance of claims 1-28. If Examiner finds any issue that is unresolved, he may reach applicants' attorney by dialing the telephone number printed below.

Respectfully submitted,



Robert N. Rountree
Reg. No. 39,347
Attorney for Applicants

Texas Instruments Incorporated
P. O. Box 655474, M/S 3999
Dallas, Texas 75265
(972) 917-4431
Fax: (972) 917-4418